

REMARKS

Applicants respectfully request reconsideration of this application, and reconsideration of the Office Action dated June 15, 2004. Upon entry of this Amendment, claims 1-4, 6, and 7 remain pending in this application. The changes to claim 1 are for purposes of clarity. Claim 7 has been amended by incorporating the features of claim 1 into claim 7. No new matter is introduced as a result of this Amendment.

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Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 112, second paragraph, as purportedly indefinite. Specifically, the Office Action asserts the terminology "load port" in claim 1 lacks antecedent basis and that claim 7 is a hybrid claim and thus indefinite.

In response, Applicants have amended claim 1 to ensure proper antecedent basis of the questioned terminology. In addition, claim 7 also has been amended as suggested by the Examiner. Hence, this rejection is overcome and its withdrawal is respectfully requested.

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Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as purportedly obvious based on Hendrickson et al. (U.S. Pat. No. 6,257,827) in view of Van Doren et al. (U.S. Pat. No. 5,733,096). Applicants respectfully traverse.

Independent claim 1 concerns a transfer system for transferring an object to be processed both out of and back into a carrier mounted on a top face of a load port unit. Both the load port unit and the guide rail are mounted on the front wall of the system body. In other words, both the load port unit and the guide rail are commonly fixed on the front wall.

As explained in the last Amendment (March 18, 2005), the robot linearly reciprocates along the guide rail. Therefore, because the guide rail and the load port unit are fixed to the same structure (front wall), there is a precise positional relationship between the transfer robot and the carrier positioned on the top face of the load port. As a result, the transfer robot accesses the carrier without positional errors, and precisely transfers objects to and from the carrier. Because,

in wafer processing systems, a plurality of stages can be arranged in tiers, with wafers stocked on each stage, such precise movement and positioning of the transfer robot is important.

In the Office Action, it is asserted that Hendrickson discloses a system having both the load port unit (72) and the guide rail mounted on the front wall (68) of the system body. However, in Hendrickson's system, the cassette (73) is moved vertically with respect to the load port unit (72). See column 4, lines 46-48. In other words, in Hendrickson's system, the cassette (73) is moved to the transfer robot (76) instead of moving the transfer robot (76) to the cassette (73) when a wafer is transferred from and to the cassette (73). Applicants point out that in Hendrickson's system, the movement of the transfer robot (76) is to access the load locks (58) and not to transfer a wafer from and to the cassette (73).

Since it is the cassette (73) that is moved vertically with respect to the load port unit (72), Applicants maintain that a precise positional relationship cannot be attained between the transfer robot (76) and the carrier (73) in Hendrickson. Applicants urge that this is so even if both the load port unit (72) and the guide rail were mounted on the front wall (68) of the system body in Hendrickson.

In contrast, in the present invention, the carrier (C) is mounted on the top face of the load port unit (L) and is not moved with respect to the load port unit (L), but remains stationary. Then, as explained above, because the guide rail and the load port unit are fixed to the same structure in Applicant's system, there is a precise positional relationship between the transfer robot and the carrier positioned on the top face of the load port. These features are neither taught nor fairly suggested by Hendrickson or Van Doren. In addition, there is nothing in the teachings of the cited patents which would have motivated those of ordinary skill to have arrived at Applicants' claimed structural arrangement. Hence, in view of the above, Applicants submit this rejection is overcome and requests it be withdrawn.

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Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as purportedly obvious based on Hendrickson et al. in view of Van Doren et al., and further in view of Akimoto et al. (U.S. Pat. No. 5,844,662).

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as purportedly obvious based on Hendrickson et al. in view of Van Doren et al., and further in view of Teramachi (U.S. Pat. No. 4,681,506) or Sakino et al. (U.S. Pat. No. 5,040,431).

These two rejections are addressed together as similar issues are applied to both. Moreover, Applicants respectfully traverse both rejections.

The deficiencies of Hendrickson and Van Doren are discussed above. None of the secondary documents remedies these deficiencies. None of the cited patents teaches or fairly suggests a transfer system having a carrier that is mounted on the top face of the load port unit wherein the carrier remains stationary thereby enabling a precise positional relationship between the transfer robot and the carrier. There is nothing in the teachings of the cited patents which would have motivated those of ordinary skill to have arrived at Applicants' claimed structural arrangement. Hence, in view of the above, Applicants submit both rejections are overcome and request they both be withdrawn.

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Applicants respectfully submit that this Amendment and the above remarks obviate the outstanding rejections in this case, thereby placing the application in condition for immediate allowance. Action in this regard earnestly is solicited.

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If any additional fees are due in connection with the filing of this Amendment, such as fees under 37 C.F.R. §§1.16 or 1.17, please charge the fees to Deposit Account 02-4300; Order No. 033082.116.

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